REMARKS:

Claims 1 to 3, 5 to 7, and 9 to 22 are in the application, with claims 4 and 8 having been cancelled. The independent claims herein, namely claims 1, 2, 3, 7, and 22, have been amended. Reconsideration and further examination are respectfully requested.

Section 112, ¶ 2, Rejection

Claims 3 to 6 and 11 to 22 were rejected under 35 U.S.C. § 112, ¶ 2, for alleged indefiniteness. In particular, the Office Action indicated that it was not clear what was meant by a "frequency measuring element" in claim 3 and "measuring a frequency of packets" in claims 9 and 11. Applicants respectfully traverse this rejection.

In this regard, Applicants respectfully note that "[d]efiniteness of claim language must be analyzed, not in a vacuum, but in light of: (A) The content of the particular application disclosure; (B) The teachings of the prior art; and (C) The claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made." M.P.E.P. § 2173.02. In the present case, in view of the disclosure, one skilled in the art would give the term "frequency" in the claims it's common definition of "the number of times a specified periodic phenomenon occurs within a specified interval" (The American Heritage Dictionary of the English Language, Fourth Edition (2000)).

Thus, a "frequency measuring element" is an element that measures the number of times a specific phenomenon occurs withing a specified interval. In the context of this

application, that phenomenon involves packets. For example, and without limitation, the measured phenomenon could be the number of packets sent, the number of packets received, the number of packets sent or received, the number of a particular type of packets sent and/or received, etc. Likewise, "measuring a frequency of packets" clearly is measuring how many packets occur (e.g., sent, received, sent or received, etc.) within a specified interval.

In view of the foregoing, Applicants believe that there is nothing whatsoever indefinite about claims 3 to 6 and 11 to 22. Withdrawal of the § 112, ¶ 2, rejection of these claims is therefore respectfully requested.

Claims 1 and 2

Claims 1 and 2 were rejected under 35 U.S.C. § 102(e) over U.S. Patent No. 5,771,231 (Watanabe). Claims 1 and 2 have been amended.

Claim 1 recites a method including steps for collecting aggregate information about network traffic while maintaining processor load relatively constant for a processor controlling the collecting despite substantial variation in network traffic. Claim 2 recites a system including means for collecting aggregate information about network traffic, and means for maintaining processor load relatively constant for a processor controlling the means for collecting despite substantial variation in network traffic.

The applied art, namely Watanabe, is not seen to disclose or to suggest the foregoing features of claims 1 and 2, at least with respect to collecting aggregate information

about network traffic while maintaining processor load relatively constant for a processor controlling the collecting of the information.

In more detail, Watanabe teaches a system in which a "call processor executes call processing" and a "traffic processor collects traffic data" (Watanabe, Abstract). As a result, the arrangement in Watanabe "makes it possible to collect and edit traffic data ... without burdening the call processor" (Watanabe, Abstract). The Examiner apparently concluded that by splitting the work between the call and traffic processors, "the call processor maintains relatively constant load" (Office Action, page 3). Applicants respectfully disagree with this conclusion: While splitting the work certainly reduces the load on the call processor, Applicants believe that more traffic would certainly involve more processing call processing by Watanabe's call processor. Applicants see nothing in Watanabe that contradicts this belief.

Furthermore, as amended, claims 1 and 2 now recite that the load is maintained relatively constant for the "processor controlling the collecting." Clearly, this processor is more akin to Watanabe's traffic processor. Applicants submit that substantial variation in network traffic would substantially change the load on Watanabe's traffic processor. More traffic would involve more collection and editing of traffic data by the traffic processor. Accordingly, Watanabe is not seen to disclose or to suggest claim 1 and 2's feature of collecting aggregate information about network traffic while maintaining processor load relatively constant for a processor controlling the collecting of the information.

In view of the foregoing, reconsideration and withdrawal are respectfully requested of the § 102(e) rejection of claims 1 and 2.

Claims 3 to 6

Claims 3 to 6 were rejected under 35 U.S.C. § 103(a) over 5,559,801 (Lo) in view of U.S. Patent No. 5,646,959 (Kamishima). Claim 3 has been amended to recite the features of claim 4, which has been cancelled without prejudice or disclaimer of subject matter.

Claim 3 recites a system including an input port for receiving network packets and a sampling element for selecting a fraction of those packets for review. The sampling element includes a feedback element for adaptively altering the fraction. The system also includes a queue of selected packets, a packet-type detector coupled to the queue, and a frequency measurement element coupled to the packet-type detector. According to amended claim 3, the feedback element is responsive to a length of the queue.

The applied art, alone or in combination, is not seen to disclose or to suggest the foregoing features of claim 3, at least with respect to a feedback element for adaptively altering a fraction of packets selected for review that is responsive to a length of a queue of selected packets.

In more detail, Lo teaches a sampling interval for packets. When each sampling interval expires, Lo's data packet sampling system transmits a packet to a management unit (Lo, col. 5, lines 12 to 19). The Examiner apparently equated this use of a sampling interval with the claimed adaptive alteration of a fraction of packets for selection.

However, Lo goes on to state that "[t]he particular selection algorithm chosen [for the sampling interval] is dependent upon many factors and plays no particularly relevant part in the present invention, other than providing the actual sampling interval values." (Lo, col. 5, lines

22 to 25). Thus, Lo is not seen to discuss a specific method or technique for determining to what extent to alter a fraction of packets for selection, and in particular is not seen to teach claim 3's adaptive alteration of the fraction that is responsive to a length of a queue of selected packets.

Kamishima, which was cited for disclosing a terminal adapter that includes at least one packet type detector, is not seen to add anything to remedy the foregoing deficiencies of Lo.

For at least the foregoing reasons, reconsideration and withdrawal are respectfully requested of the § 103(a) rejection of claim 3. Reconsideration and withdrawal also are requested of the § 103(a) rejection of claims 5 and 6, which depend from claim 3.

Claims 7 to 21

Claims 7 to 21 were rejected under 35 U.S.C. § 102(b) over U.S. Patent No. 5,559,801 (Lo). Claim 7 has been amended to recite the features of claim 8, which has been cancelled without prejudice or disclaimer of subject matter.

Claim 7 recites a method including steps for sampling a set of packets at a network interface of a switch. The steps for sampling including steps for adaptively altering a fraction of the packets for selection. The steps for adaptively altering a fraction of the packets for selection include steps for maintaining a queue of selected packets, and altering the fraction in response to a length of the queue.

The applied art, namely Lo, is not seen to disclose or to suggest the foregoing features of claim 7, at least with respect to altering a fraction of the packets for selecting in response to a length of a queue of selected packets.

In more detail, Lo teaches a sampling interval for packets. When each sampling interval expires, Lo's data packet sampling system transmits a packet to a management unit (Lo, col. 5, lines 12 to 19). The Examiner apparently equated this use of a sampling interval with the claimed adaptive alteration of a fraction of packets for selection.

However, Lo goes on to state that "[t]he particular selection algorithm chosen [for the sampling interval] is dependent upon many factors and plays no particularly relevant part in the present invention, other than providing the actual sampling interval values." (Lo, col. 5, lines 22 to 25). Thus, Lo is not seen to discuss a specific method or technique for determining to what extent to alter a fraction of packets for selection, and in particular is not seen to teach claim 7's alteration of the fraction in response to a length of a queue of selected packets.

For at least the foregoing reasons, reconsideration and withdrawal are respectfully requested of the § 102(b) rejection of claim 7. Reconsideration and withdrawal also are requested of the § 102(b) rejection of claims 9 to 21, which depend directly or indirectly from claim 7.

Claim 22

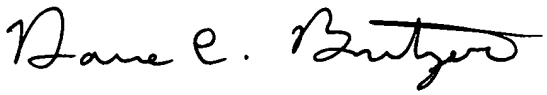
Claim 22 recites the elements of claims 2 and 3. Thus, claim 22 is believed to be allowable for substantially the same reasons as discussed above with respect to claims 2 and 3.

Closing

In view of the foregoing amendments and remarks, the entire application is believed to be in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

Applicants' undersigned attorney can be reached at (614) 486-3585. All correspondence should continue to be directed to the address indicated below.

Respectfully submitted,



Dated: September 20, 2001

Dane C. Butzer
Reg. No. 43,521

The Swernofsky Law Group
P.O. Box 390013
Mountain View, CA 94039-0013
(650) 947-0700

Changes to Claims

Pursuant to 37 C.F.R. § 1.121(c)(ii), changes to any claims effected by the accompanying paper are indicated below.

Claims 4 and 8 have been cancelled without prejudice or disclaimer of subject matter.

Claims 1, 2, 3, 7 and 22 have been amended as follows:

1. (Amended) A method including steps for collecting aggregate information about network traffic while maintaining processor load relatively constant for a processor controlling said collecting despite substantial variation in network traffic.

2. (Amended) A system including

means for collecting aggregate information about network traffic; and

means for maintaining processor load relatively constant for a processor controlling said means for collecting despite substantial variation in network traffic.

3. (Amended) A system, including

an input port for receiving network packets;

a sampling element for selecting a fraction of those packets for review, said sampling element including a feedback element for adaptively altering said fraction;

a queue of selected packets;

a packet-type detector coupled to said queue; and

a frequency measurement element coupled to said packet-type detector;

wherein said feedback element is responsive to a length of said queue.

7. (Amended) A method, including steps for sampling a set of packets at a network interface of a switch, said steps for sampling including steps for adaptively altering a fraction of said packets for selection;

wherein said steps for adaptively altering a fraction of said packets for selection include steps for

maintaining a queue of selected packets; and

altering said fraction in response to a length of said queue.

22. (Amended) A system including

means for collecting aggregate information about network traffic;

means for maintaining processor load relatively constant for a processor controlling said means for collecting despite substantial variation in network traffic;

wherein said means for collecting and said means for maintaining include an input port for receiving network packets, a sampling element for selecting a fraction of those packets

for review, said sampling element including a feedback element for adaptively altering said fraction, a queue of selected packets, a packet-type detector coupled to said queue, and a frequency measurement element coupled to said packet-type detector; and

wherein said feedback element is responsive to a length of said queue.